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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 19, 2011

Mr. Shawn Ghose
USEPA Region 6
Superfund Division (6SF-AP)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

RECEIVED
2011 MAY 25 PM 4:10
SUPERFUND DIV.
REMEDIAL BRANCH
(6SF-R)

Re: Comment Letter for the Star Lake Canal Final Tier 2 Remedial Investigation Report
Star Lake Canal Federal Superfund Site, Port Neches, Texas
TCEQ Identification No. SUP149

Dear Mr. Ghose:

The Texas Commission on Environmental Quality has reviewed the Final Tier 2 Remedial Investigation (RI) Report dated April 2011, and has the following comments:

- **Section 1.4, Applicable or Relevant and Appropriate Requirements**
It is noted that only Federal Applicable or Relevant and Appropriate Requirements (ARARs) were referenced and not the State ARARs. Please include references to the State ARARs, e.g., 30 Texas Administrative Code (TAC) Chapter 350 Subchapter D Section 350.77 relating to Ecological Risk Assessment and Development of Ecological Protective Concentration Levels. These should also include the Human Health ARARs as well.
- **Section 10.3 Huntsman Groundwater Corrective Action Monitoring**
Review of the information in Appendix M relating to the Huntsman Site-Wide Ground Water Monitoring Program indicates that there are several chemical of concern (COC) plumes that are affecting portions of the Star Lake Canal Site's sediment and surface water. These COCs will continue to be a contributing source to the Site's contamination and will need to be addressed in the Feasibility Study.
- In addition to the above comments, please see the attached TCEQ Interoffice Memorandum, dated May 18, 2011 containing comments from the TCEQ Ecological Risk Assessor.

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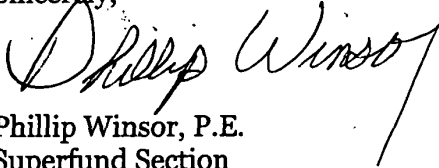
Mr. Shawn Ghose

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Please contact me at (512) 239-1054 or Phillip.Winsor@tceq.texas.gov with any questions or concerns regarding this project.

Sincerely,

A handwritten signature in black ink that reads "Phillip Winsor". The signature is written in a cursive style with a large, stylized "P" and "W".

Phillip Winsor, P.E.

Superfund Section

Remediation Division


Texas Commission on Environmental Quality

PW/sr

Enclosure

TCEQ Interoffice Memorandum

To: Phil Winsor, Project Manager; Superfund Section, Remediation Division

From:  Larry Champagne, Ecological Risk Assessor; Technical Support Section, Remediation Division

Date: May 18, 2011

Subject: Star Lake Canal Superfund Site
Final Tier 2 Remedial Investigation Report
April 2011

I have completed my review of the baseline ecological risk assessment (BERA) portion of this revised Remedial Investigation (RI) report. As presented below, I still have several concerns that will need to be addressed either in the "Alignment Document" or the Feasibility Study (FS).

General Comments:

1. This revised RI report is much improved over the previous version, particularly with the addition of the methodology to evaluate the lines of evidence. However, ecological risk for upper trophic level receptors has yet to be quantified and questions remain regarding the degree of impact between sample locations with elevated COPEC concentrations. This information should be provided in the Alignment Document prior to the submittal of the FS.
2. The use of TCEQ's second effects levels to indicate risk to benthic invertebrates in the BERA is unacceptable. The rationale for including second effects levels in the guidance is to provide a paired set of effect levels from which midpoints can be taken to serve as benthic invertebrate protective concentration levels (PCLs). The sole purpose of the second effects levels is to be an upper bound to the initial effects levels lower bound so that a midpoint can be derived. As stated in the TCEQ (2006) guidance, these two levels are viewed as being comparable to the NOAELs and lowest observed adverse effect levels (LOAELs) used in wildlife exposure evaluations. The COPEC PCL for wildlife lies between a NOAEL-based PCL and a LOAEL-based PCL, with the midpoint as default. Therefore, any comparison to the second effects levels should be removed. When TCEQ benthic PCLs are available, it is inappropriate to compare sediment concentrations to levels that exceed these PCLs.

TCEQ Interoffice Memorandum

3. Some rationale is needed to explain why the PEL-Q numerical range for identifying site categories changed from the previous version of this RI report.
4. It does not appear that an explanation was provided for why total PAHs were dropped from the ERM-Q/PEL-Q analysis and replaced with individual PAHs. This change in methodology needs to be explained and justified.

Specific Comments:

1. P. 146, Section 9.4.2 Comparison to Benchmarks; P. 161, Section 9.5.1.2.1 Sediment; and Tables 9-13 and 9-14: Justification is needed why only those COPECs not evaluated with the ERM-Q/PEL-Q analysis were compared to the benchmark values. All lines of evidence identified in this report that are available for a particular COPEC should be utilized.
2. P. 147, Section 9.4.2 Comparison to Benchmarks: The discussion regarding PAHs misquotes TCEQ (2006). If the total PAH concentration is compared to the midpoint PCL and results indicate $H > 1.0$, TCEQ guidance does not say that the total PAHs are then compared to the second effects level benchmark. This methodology is inappropriate and should be discontinued.
3. P. 159, Section 9.5.11 Mean ERM and PEL Quotients and Tables 9-2 and 9-3: As indicated in the General Comment, explain why the PEL-Q numerical range for identifying site categories changed from the previous version of this RI report.
4. P. 162, Section 9.5.1.2.1 Total PAH in Sediment: As discussed in the General Comment, TCEQ's second effects level benchmarks should not be used as an indicator of risk when midpoint PCLs are available.
5. P. 163, Section 9.5.1.2.3 Soil and Table 9-20: The Texas Specific Median Background Concentration appearing in Table 3-4 of TCEQ (2006) was inappropriately used as a benchmark value when it was the lower than the soil invertebrate and plant values. These background concentrations were included in TCEQ guidance only for reference and are not meant to be used as screening levels.
6. P. 170, Section 9.5.2.1 Risk to Benthic and Epibenthic Organisms: The reference to TCEQ (2005) should be to TCEQ (2006).

TCEQ Interoffice Memorandum

7. P. 175, Section 9.5.2.4 Risk to Upper Trophic Level Receptors: It should be stated here that if the $HQ_{(NOAEL)}$ exceeds one for threatened/endangered species, risk is high. Also since the GMATC occurs within the NOAEL/LOAEL range, whenever $HQ_{(GMATC)} > 1 > HQ_{(LOAEL)}$, risk should be considered to be likely.
8. P. 189, Section 9.6.4, 1st paragraph, Upper Trophic Level Receptors: It is acknowledged that risk to the White-faced ibis, Wood stork, and Painted turtle is discussed later in this section. However, this risk should be acknowledged here as well since it is stated that no COPEC exposure posed unacceptable risk to the other protected species.
9. P. 231, Section 14.0 References: The first TCEQ reference should be deleted as the 2006 date pertains to the update to the cited guidance. Also, the date of the last TCEQ reference (1991) should be 2001.
10. P. 215, Section 12.0 Conclusions: The following comment (with slight revisions) was previously submitted during the review of the previous version of this report. The February 2011 response to that comment indicated that it would be addressed; however, as it does not appear to have been, it is repeated here: Although potential risk to benthic invertebrates was acknowledged in the BERA conclusions, the conclusions here appear to downplay the ecological risk at the site by focusing on upper trophic level receptors. Statements like "the BERA determined that potential ecological risk exists for some of the receptors that utilize the Site from exposure to certain constituents" and "... there is a subset of locations in either freshwater or saltwater areas that appear to be influencing much of the risk estimated to upper trophic level receptors" are misleading as widespread ecological risk is apparent for the benthic invertebrate community. Nowhere in this section is risk to benthic invertebrates mentioned.
11. Tables 9-2 and 9-3: As indicated in the General Comment, an explanation is needed for why total PAHs were dropped from the ERM-Q/PEL-Q analysis and replaced with individual PAHs.

References:

TCEQ. 2006. Update to Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas RG-263 (Revised). January 2006 Version.
<http://www.tceq.state.tx.us/remediation/eco/eco.html>